

## CLAIMS

What is claimed is:

- 5 1. A method for assuring H.323 alias address portability, services portability, and service provider portability to an H.323 user in real-time H.323 multimedia communications where the H.323 user is registered with a home gatekeeper for the home zone of the H.323 user, comprising the steps of:

10 sending, by the H.323 user, a message with a called H.323 entity's alias address, to the home gatekeeper to originate a call to the called H.323 entity; confirming that the alias address is portable; converting the alias address to a called routable alias address for the called H.323 entity and sending the alias address to the H.323 user; and placing the call to the called H.323 entity.

- 15 2. A method for providing H.323 alias address portability to an H.323 user in real-time H.323 multimedia communications wherein a geographical location is divided into home/visitor zones, and wherein each home/visitor zone has an associated home gatekeeper that maintains a centralized home/visitor location database for home and visitor location information wherein administrative zones of the geographical location the centralized home/visitor location database is known and the H.323 user is registered with a home gatekeeper for the home zone of the H.323 user, comprising the steps of:

20 sending, by the H.323 user, a message with a called H.323 entity's alias address, to the home gatekeeper to originate a call to the called H.323 entity;

translating, by the home gatekeeper, the alias address to a called routable alias address for the called H.323 entity;

sending, by the home gatekeeper, the called routable alias address to the called H.323 entity; and

placing the call to the called H.323 entity.

3. The method of claim 2 wherein each administrative domain has at least one zone.

4. The method of claim 2 wherein an alias address assigned to an H.323 user is kept fixed as the user moves from one place to another.

5. The method of claim 4 wherein the alias address is an E.164 number.

6. The method of claim 2 wherein a domain for an alias address assigned to the H.323 user in an administrative domain is a donor domain.

7. The method of claim 2 wherein, where the alias address assigned to the H.323 user is moved from a donor domain to a new domain due to roaming of the H.323 user, the new domain is called a recipient domain.

8. The method of claim 7 wherein the alias address in the recipient domain is referred to as a ported number.

9. The method of claim 2 wherein, before sending, by the home gatekeeper, the called routable alias address to the called H.323 entity, the home gatekeeper notifies the H.323 user of an approximation of a cost of making the call.

10. The method of claim 2 wherein location information for the H.323 user is updated by querying, by the home gatekeeper, location databases during call establishment by the H.323 user.

11. The method of claim 2 wherein the call is placed directly by the H.323 user.
12. The method of claim 2 wherein the H.323 user moves to an administrative domain of the called H.323 entity and the call is placed via a home gatekeeper of the called H.323 entity.

5 13. A method for providing H.323 alias address portability to an H.323 user in real-time H.323 multimedia communications wherein a geographical location is divided into home/visitor zones, and wherein each home/visitor zone has an associated home gatekeeper with an administrative domain having an administrative domain database for providing alias addresses to the home gatekeeper, wherein administrative zones of the geographical location the administrative domain database are known and the H.323 user is registered with a home gatekeeper for the home zone of the H.323 user, comprising the steps of:

sending, by the H.323 user, a message with a called H.323 entity's alias address, to the home gatekeeper to originate a call to the called H.323 entity;

15 sending a query message with the alias address to a home gatekeeper of the administrative domain for the H.323 user to determine portability of the alias address;

where the administrative domain of the H.323 user confirms portability of the alias address, implementing the following steps:

20 querying a database containing the alias address to determine whether the alias address must be mapped to a routable alias address and where the alias address must be mapped, implementing the following steps:

mapping the alias address to the routable alias address for the called  
H.323 entity;

sending the routable alias address for the called H.323 entity to the H.323  
user; and

5 placing the call to the called H.323 entity.

14. The method of claim 13 wherein each administrative domain has at least one zone.

15. The method of claim 13 wherein an alias address assigned to an H.323 user is kept fixed  
as the user moves from one place to another.

16. The method of claim 15 wherein the alias address is an E.164 number.

10 17. The method of claim 13 wherein a domain for an alias address assigned to the H.323  
user in an administrative domain is a donor domain.

18. The method of claim 13 wherein, where the alias address assigned to the H.323 user is  
moved from a donor domain to a new domain due to roaming of the H.323 user, the new  
domain is called a recipient domain.

15 19. The method of claim 18 wherein the alias address in the recipient domain is referred to  
as a ported number.

20. The method of claim 13 wherein, before sending, by the home gatekeeper, the called  
routable alias address to the called H.323 entity, the home gatekeeper notifies the H.323  
user of an approximation of a cost of making the call.

20 21. The method of claim 13 wherein location information for the H.323 user is updated by  
querying, by the home gatekeeper, location databases during call establishment by the  
H.323 user.

22. The method of claim 13 wherein the call is placed directly by the H.323 user.
23. The method of claim 13 wherein the H.323 user moves to an administrative domain of the called H.323 entity and the call is placed via a home gatekeeper of the called H.323 entity.

- 5 24. A system for providing H.323 alias address portability to a H.323 user in real-time H.323 multimedia communications wherein a geographical location is divided into home/visitor zones, and wherein each home/visitor zone has an associated home gatekeeper that maintains a centralized home/visitor location database for home and visitor location information wherein administrative zones of the geographical location the centralized home/visitor location database is known and the H.323 user is registered with a home gatekeeper for the home zone of the H.323 user, comprising:

a H.323 user, arranged to send by a message with a called H.323 entity's alias address, to the home gatekeeper to originate a call to the called H.323 entity, and, upon receiving a called routable alias address for the called H.323 entity, to complete the call to the called H.323 entity; and

the home gatekeeper, arranged to translate the alias address to the called routable alias address for the called H.323 entity and send the called routable alias address to the called H.323 entity.

25. A system for providing H.323 alias address portability to an H.323 user in real-time H.323 multimedia communications wherein a geographical location is divided into

home/visitor zones, and wherein each home/visitor zone has an associated home gatekeeper with an administrative domain having an administrative domain database for providing alias addresses to the home gatekeeper, wherein administrative zones of the geographical location the administrative domain database are known and the H.323 user is registered with a home gatekeeper for the home zone of the H.323 user, comprising:

the H.323 user, arranged to send a message with a called H.323 entity's alias address, to the home gatekeeper to originate a call to the called H.323 entity, and upon receiving a routable alias address for the called H.323, completing the call to the called H.323 entity; and

the home gatekeeper, arranged to send a query message with the alias address to a home gatekeeper of the administrative domain for the H.323 user to determine portability of the alias address, and where the administrative domain of the H.323 user confirms portability of the alias address, for querying a database containing the alias address to determine whether the alias address must be mapped to the called H.323 routable alias address and where the alias address must be mapped, for mapping the alias address to the routable alias address for the called H.323 entity and sending the routable alias address for the called H.323 entity to the H.323 user.

26. The method of claim 1 wherein address portability includes, for selected information in the message, having a same source address, a same destination address and different intermediate addresses.

27. The method of claim 13 wherein address portability includes, for selected information in the message, having a same source address, a same destination address and different intermediate addresses.

28. The system of claim 24 wherein address portability includes, for selected information in the message, having a same source address, a same destination address and different intermediate addresses.

29. The system of claim 25 wherein address portability includes, for selected information in the message, having a same source address, a same destination address and different intermediate addresses.